

DOCUMENT RESUME

ED 298 292

CE 050 837

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TITLE Vocational Education's Reaction to Increased High School Academic Graduation Requirements.
PUB DATE Jan 87
NOTE 31p.; Paper presented at the Michigan Vocational Administrators Personnel Development Workshops (Grand Rapids and Ann Arbor, MI, January 1987).
PUB TYPE Speeches/Conference Papers (150) -- Information Analyses (070) -- Reports - Descriptive (141)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Education; Change Strategies; Comparative Analysis; Credits; Educational Change; Educational Policy; *Fused Curriculum; *Graduation Requirements; High Schools; *Program Improvement; *State Action; Statewide Planning; *Vocational Education
IDENTIFIERS New York; Ohio; Pennsylvania; Virginia

ABSTRACT

The educational reform movement has caused parents, students, businesspersons, and legislators to question the relevance of vocational education. Charges that vocational education has become obsolete have compelled vocational educators to work on improving its image in three areas--function, quality, and style. The vocational education programs in New York, Pennsylvania, Virginia, and Ohio have each found their own way of responding to increases in the academic requirements for high school graduation. New York has taken a proactive leadership role by designing state syllabi for vocational education that make it possible for students to earn credit for academic skills acquired in occupational courses. Virginia has provided substitutions, guidelines, and standards that will help students obtain academic credit for vocational course work at the local level. Pennsylvania has initiated the idea of fractional credit that may be approved by counting parts of the vocational program that are documentable to be academic credit. Ohio, on the other hand, has not approved vocational courses for academic credit. It did, however, develop a two-year pilot of nine projects allowing three alternatives for obtaining academic credit for vocational courses. Reports from all three states indicate that these programs have been successful and well received. (MN)

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VOCATIONAL EDUCATION'S REACTION
TO INCREASED HIGH SCHOOL
ACADEMIC GRADUATION REQUIREMENTS

by
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Now is the time of change in vocational education. Across the country, states and localities are re-examing the foundations of vocational education, the need for vocational education, and the rationale for vocational education as it exists today. A major impetus to this re-examination on such a wide scale has been the advent of increased high school academic requirements. The projected effect of increasing graduation requirements is to decrease the amount of available time for students to participate in vocational education. These remarks provide a look at how states are dealing with increased graduation requirements and what some of the issues are and will be in the future.

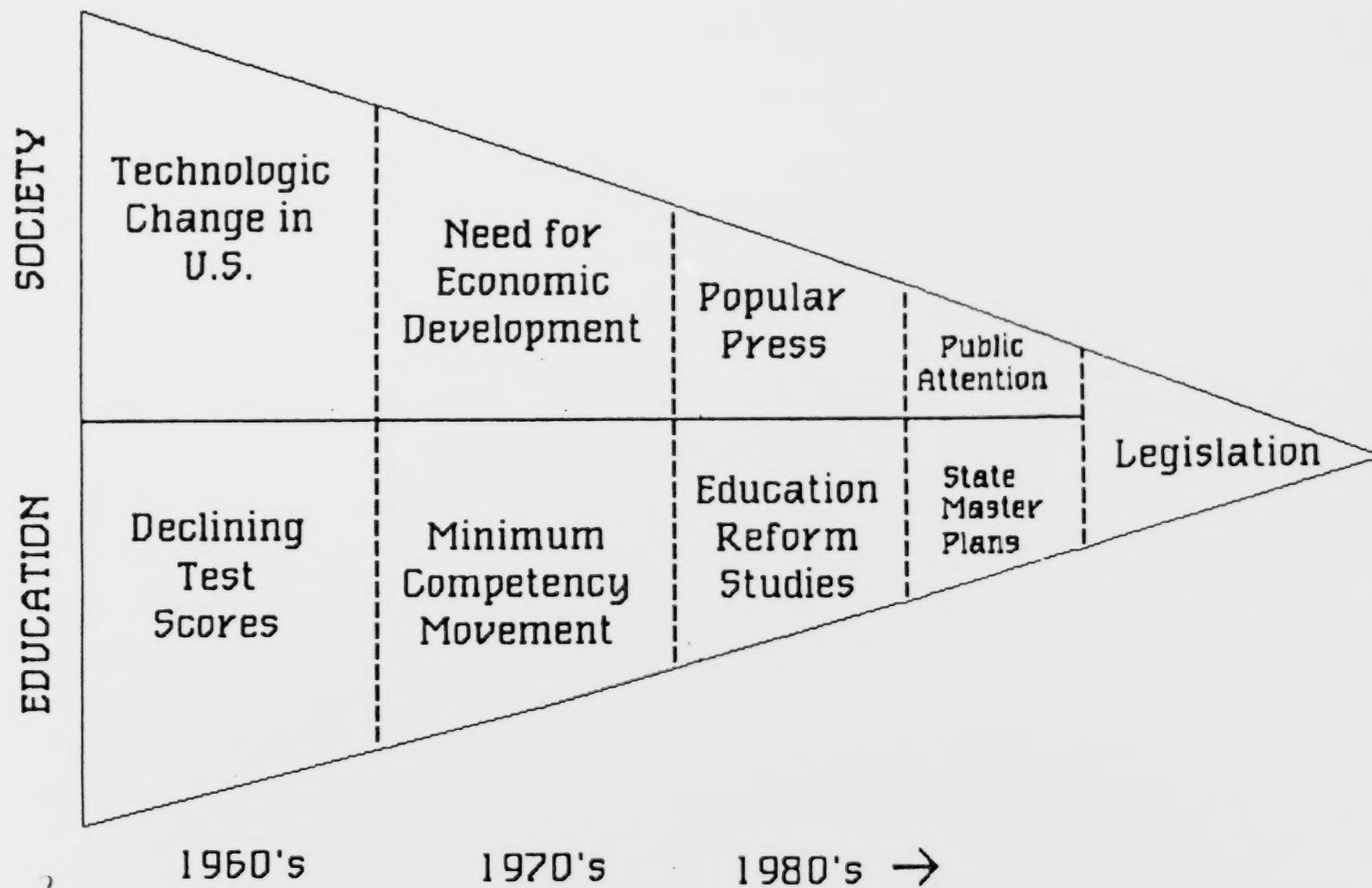
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It is not surprising that high school graduation requirements are being strengthened when one looks at the pressures that have been brought to bear on education since the 1960's. (See figure I) Two mainstreams of pressure have been ongoing--one in the educational arena and the other in the general societal arena. In the early 60's, the whole of the United States became well-informed that we had emerged from an industrial revolution and were in the midst of an information and service revolution which would effect the majority of jobs in the United States. At the same time, we were looking and hearing of the general decline in test scores for our high school students.

Speech Provided to Michigan Voc. Administrators, "Pers. Dev. Workshops",
Grand Rapids and Ann Arbor, Jan., 1987.

HOW THE ISSUE CAME TO BE

Fig. 1



These two elements together made the general public and educators alike grow to a near panic stage as more and more research and prognosis told us that we had a growing need for re-structuring of employment and a need to strengthen our economic development endeavors in order to salvage what jobs we could and prepare for the new and emerging jobs. The question on everyones mind was how to re-train an existing work force and how to shore up the obvious lack of academic credentials that we were seeing as a result of the declining test scores. Education's response across the country was to attempt to increase the rigor of education in the states by implementing minimum competencies.

The 70s were rife with states implementing minimum competency legislation in answer to the declining test scores and our general need for upgrading people in order to meet the evolving economic development changes that would effect jobs. It was at this time that we started to hear about the value of worker participation. "Quality circles" and "productivity" became the catch words of the day and everyone became involved with measuring productivity and increasing productivity and involving the worker in changes that would take place within his/her responsibilities. It was also during this period that the rise in competency-based vocational education took place, grew strong, and peaked.

About this time, a major event happened at the federal level. The President's Cabinet included a U.S. Secretary of Education. Many people hoped that this exposure of educational concerns at the highest levels in our country's government would lead to policies that would ensure that our high school graduates would have increasing higher test scores and would--at the very minimum--meet state competencies.

The 80s began with a rush of education reform studies that, because of the previous popularity given to the education issue and the new Secretary of Education within the President's cabinet, received not only a good deal of attention from the

education community but from the community at large. In addition to the education reform studies, the popular press was peppered with tomes such as John Nesbitt's Megatrends, work by Yankelovich and others on "the changing nature of the work force," and the requirements of the workplace in order to accommodate the changing worker. Matched up to this, then, "The Nation at Risk," 1984, started what turned out to be over 200 education reform studies and reactions to those studies. Let's highlight a few of the reports that relate to the issue of this article in which more and more attention was paid to the recommendation to increase the academic foundations of the high school experience. "Education for Tomorrow's Jobs," a report done by the National Academy of Science, released in 1984, emphasized increased basic skills; recommended a change in the time rather than the content of what was being taught; and recommended a merge of vocational education and academic competencies. Following close behind were other studies including, "High School and the Changing Workplace," an employer's view which also stressed applied academics and recommended core competencies in addition to academics being strengthened as a foundation for vocational education. The vocational education community's own response, entitled "The Unfinished Agenda," also released in 1984, called for balance and quality to the curriculum and emphasized that we should not pursue narrowness over quality.

Public attention continued to be riveted on the issue of our nation's lagging high school academic competencies focusing on poor literacy, weak written communication, deficient math skills, and almost absent science competencies. These became the issues in meetings across the country from the research community to the governors' conferences.

Television news programs started paying more attention to educational issues. *Fortune* magazine was just one of the magazines to devote space to the issue of education in general and vocational education's inefficiency in specific. The general

state level reaction to all of this attention found its way in the form of state master plans. States started looking at the minimum competencies for general education and looking at vocational education and started to put together state master plans of minimum competencies and how local schools were to meet these minimum competencies. On the legislative side, both federal and state legislation emphasized minimum competency achievement in general education as well as vocational education. The National Council on Vocational Education as well as other groups continue to examine the need and methodology for increased academics and how they can correlate with vocational education offerings in order to provide the best options possible for all students.

How are people looking at vocational education through all of this change and series of recommendations? How ARE people -- parents, students, business people, legislators -- seeing vocational education?

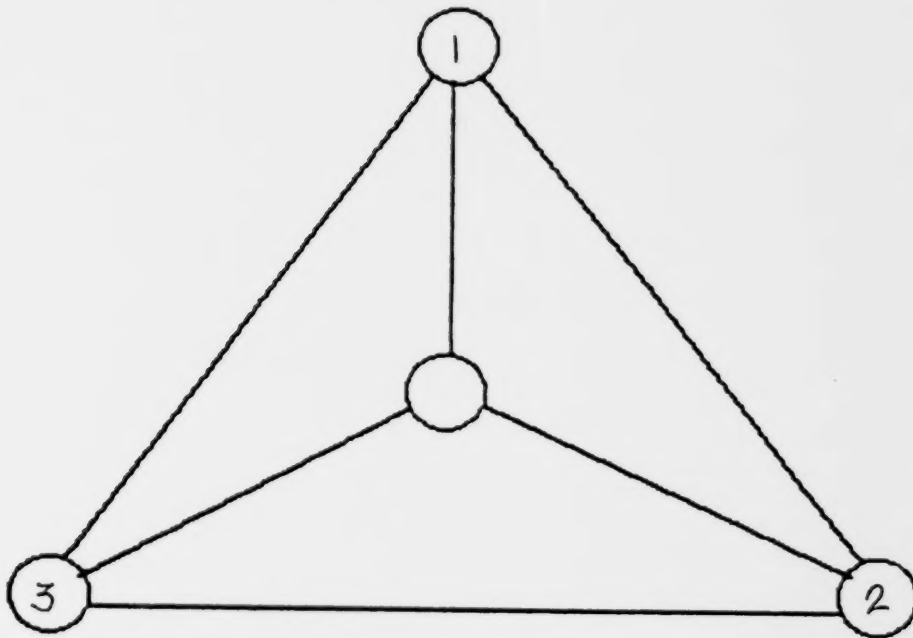
One of the major charges against vocational education is that it is obsolete.

Figure 2 shows the obsolescence fusion triangle and points up the need for vocational education to increase its image and change in three areas. Area number one is in its function. In order to keep from becoming obsolete, vocational education needs to find a better way to function. Area number two is that of quality. Vocational education needs to produce a better result and increase its quality in order to keep from being obsolete. The last part of the obsolescence fusion triangle has to do with style. Vocational education needs a better image in order to keep from becoming obsolete. In other words, it cannot rely on the same programs, for the same audiences, done the same way.

Many people are looking at the increased academic requirements to make a change in vocational education--a change that is long overdue in some areas--and to do it with support and backing of the academic community. Vocational education has an opportunity to upgrade and refine programs under the rationale

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OBSOLESCENCE FUSION TRIANGLE



FUNCTION
QUALITY
STYLE

Fig. 2

of increasing academic foundations within the vocational education program. This type of change will give vocational education an opportunity to weed out the weak programs and to condense the instruction to the absolute core in important competencies that are needed. In this way we can strengthen the good parts of our programs by eliminating the non-essential elements and concentrating on those vocational competencies that are most important. Take the time that we have used in the past for padding in order to make that full semester (or year, or two years) worth of time and use that time to increase the academic foundations so that our students will be able to better benefit from their vocational program and the rest of their educational program as well.

The issue is not one of vocational education versus academics. There is much research available, research that tells us that vocational education and academics are complementary to one another. John Bishop of Cornell University and other researchers have pointed out the following:

1. Basic skills improve productivity.
2. Basic skills enhance re-training and job change.
3. Basic skills contribute to non-academic competencies such as self-esteem.
4. Vocational education can lower verbal scores but generally does not lower math, science, or civics achievement.
5. Three to seven percent of vocational instructional time is spent on basic skills development and reinforcement.
6. The rigor of the course is the key determinant of learning--in other words the standards and the content rather than the time is the key determinant to learning. Lastly, vocational education contributes to the development of basic skills.

Why else are increased academic foundations desirable? First, it is generally accepted that life-long learning or learning to earn is a concept that supercedes our current method of retraining and providing job-specific training in secondary education. Secondly, academic foundations are desirable because they broaden a vocational student's opportunity to pursue advanced training. In addition, increased academic foundations in vocational education courses have the effect of broadening the academic or the general education student's opportunity to have

practical applications within a vocational context of the academic skills. Increased academic foundations also increase comprehension. Increased comprehension leads to increased relevancy of the content and increased relevancy of course leads to increased retention. Lastly, it is important to us to increase our academic foundations because it has been shown that the perceptions of the public about vocational education are altered when it is pointed out to them that vocational education contributes to the increased academic or basic skills of the student.

In preparation for the National Assessment of Vocational Education called for in the current legislation, some researchers have made additional pleas to encourage vocational educators to look at basic skills integration in a more dramatic way. Rosenfeld, in commenting on exemplary programs, has stated that "For the past 25 years, conventional wisdom has held that the most effective and most exemplary programs are those that most successfully place the graduates in jobs". He argues in his paper, presented at the Design Conference for the National Assessment, that technical and organizational changes are primary influencers on change in goals and expectations and that the major determinants of exemplary programs for the rest of this century will be basic skills and the ability of students to learn and adapt to new situations.

Rosenfeld and many other researchers who have been quoted recently show that we are coming full circle in looking at strengthening basic skills foundations in vocational programs. Before the first piece of vocational legislation, Smith-Hughes Act in 1909, in testimony, the AFL was quoted as saying:

The ideal vocational curriculum should be English, math, physics, chemistry, elementary mechanics and drawing, and shop instruction for the particular trades.

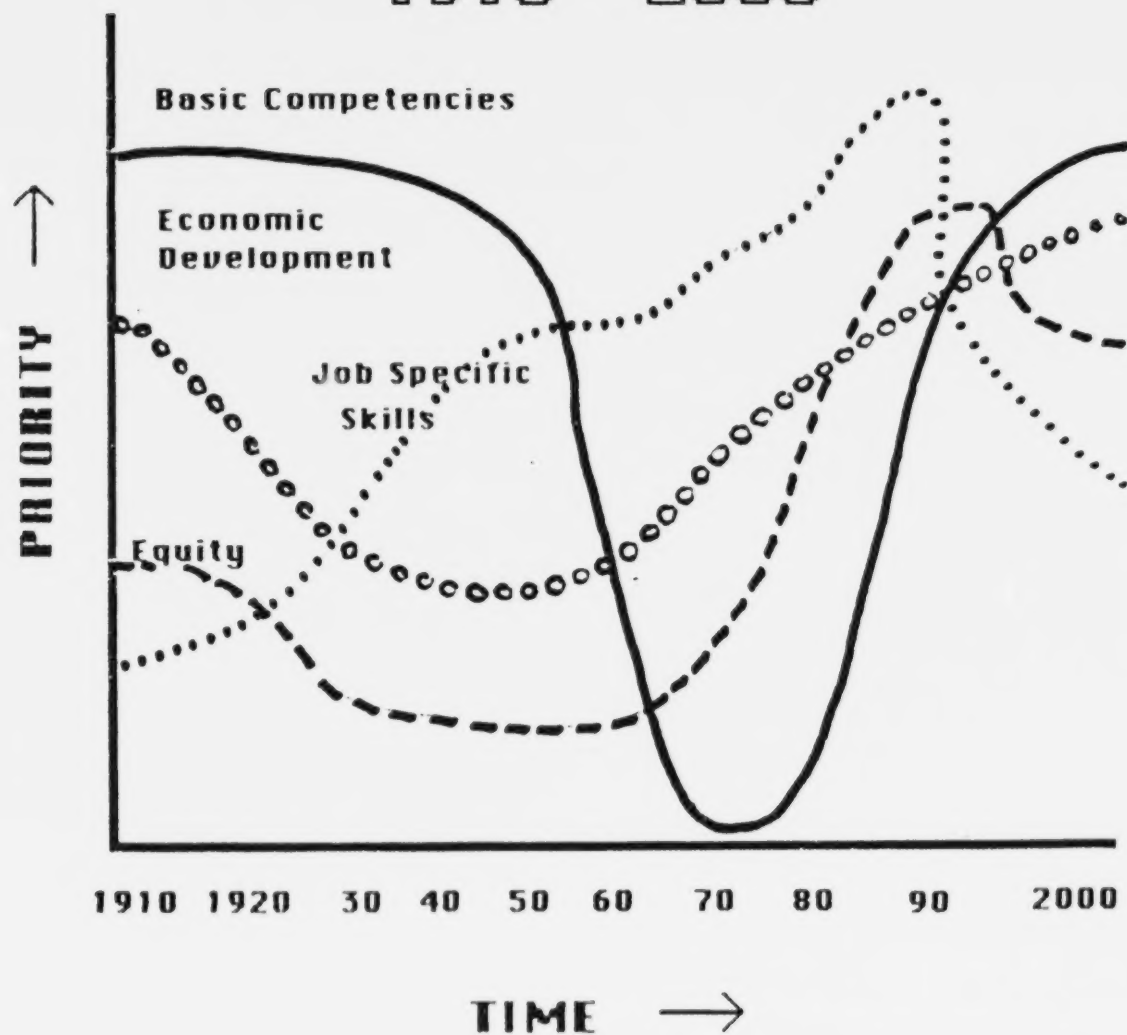
In other words, the original intent of vocational education was to give a practical application to the learning of the basic skills and in that practical application better prepare students for a career.

Figure 3 shows Rosenfeld's view of the determinants of excellence in vocational education -- from the period of 1910 and with projections through the year 2000. In his projections of all the major priorities that we have had in this century, only two continue to be on the rise. One is in the completion of basic competencies as part of the vocational program and the other is in providing programs that will assist with economic development.

There is a current study that was released in July, 1986, on vocational education's response to graduation requirements by the individual states. This report, done under the sponsorship of the Virginia Department of Vocational Education by the Virginia Polytechnic Institute, is part of a five-year longitudinal study that began in 1984. The study uses baseline data on enrollment patterns for the years 1981-86 and intends to track students for five years, 1986-1990. Part of the initial work of this project was to conduct a survey to find out what states had been experiencing and what the initial responses were to increased academic requirements. The study found that 45 states increased graduation requirements (see **Figure 4**). Of these, 15 states included vocational education as a part of those requirements. And, 28 states included vocational education as an approved alternate credit. In 6 states and 2 territories, there were no changes in the graduation requirements (Frantz, 1986).

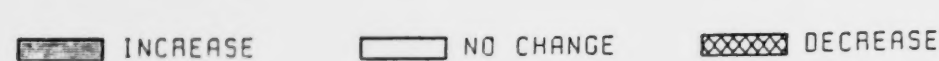
When we look at the high school enrollments, we see some trends. We find 11 states, primarily in the Southeast, Texas, and one in the Northwest, that have increased high school enrollments. We find, predictably, that in 33 states, primarily in the Midwest and Northeast, there is a decline in the general high school

DETERMINANTS OF EXCELLENCE IN VOCATIONAL EDUCATION 1910 - 2000



Rosenfeld, 1986

Fig. 3

16
1

Frantz 1986

enrollment. And, we have 8 states, primarily in the Western part of the United States, where the high school enrollments are fairly stable.

In vocational education enrollments, we see 15 states with an increase in vocational education enrollments, 22 states with a decrease in enrollments, and 13 states that appear to be fairly stable in their vocational education enrollments.

This data, then, does not support the contention that the increased high school graduation academic requirements will have highly negative influences on vocational education programs. The study, however, points out that it is too early for drop-out data to really show up since most of the reform movements call for increased graduation requirements to be implemented in 1988 and beyond. The study recommends that state and local administrators use initiatives and strategies to provide opportunities for students to enroll in vocational education courses. Let us now look at the way that states approach that.

Initially, it was felt that the increased academic requirements would show up in a decrease in vocational education enrollments. We're seeing right now that there is a decrease in the 9th and 10th grade enrollments and it is estimated that a growing population in the junior and senior years will decrease its participation in vocational education.

Some of the other trends generally anticipated are that we will see an increase in shorter-term vocational course enrollments as opposed to program enrollments and that curriculum content will need to be re-designed to incorporate basic skills. Some of the other prognoses include an anticipated difficulty in scheduling of vocational block with the increased academic requirements and also that the local education agency might add academic courses to what is proposed by state mandate.

In looking at the data that came out of the Virginia study, one has to ask the questions: Why have decreased vocational education enrollments occurred in so

many states cited in this study? What are the factors? The study cites four states with decreased vocational enrollments and increased high school enrollments. The reasons given by those states for this situation are these: in New Hampshire, a large in-migration has contributed to the increased high school enrollments and did not necessarily have an effect on decreased vocational enrollments. But, that increased graduation requirements did affect the decreased vocational enrollments. The states of Arizona and Alabama also believe the increased academic requirements are responsible for decreased vocational enrollments. Additional studies done in Colorado and California support this belief that a decrease in vocational enrollments is the result of increased graduation requirements. However, according to the study there is no conclusive data at this point to prove that that is true.

There is a hypothesis gaining a lot of support which states that the reduction of vocational education enrollments will result in increased drop-outs. Given the research on the benefits of increased academic foundations on the weak image of vocational education program quality, we find that there is an opportunity for vocational education to "clean house" and upgrade programs with the help and the support of this tide of change in increasing basic foundations in all areas of education. This gives us an opportunity to refine vocational education with the support of the academic community rather than in a more adversarial relationship.

Let's review, lastly, the data from the Virginia study that looks at states with decreased high school enrollments and increased vocational education enrollments. Why do the vocational education enrollments increase in these states? If we look at **Figure 5**, we will see that of the eight states that have increased vocational enrollments the majority of the six are Southern states where there is a lot of migration and a general influx of people and new business start-ups. Also included in this group is the state of New York, which has gone through a major re-

FACTORS CITED BY STATES WITH DECREASED HIGH SCHOOL ENROLLMENT FOR INCREASED VOC ED ENROLLMENTS

State	Pre-Voc Emphasis	Administrator/ Teacher/Counselor Recruiting Emphasis	Adult Recruiting In Secondary Programs	Increased Time Availability/ No. of Periods	Reduced Instructional Time for Voc Ed Content	Teacher Certified (Business Ed for Computers)	Funding Changes	Alternative Academic Credit	Voc Ed Quality Improvement
WV	X	X							
MS				X					
TN				X		X			
GA				X					
AL					X				
DC		X	X						
NY								X	X
OR					X			X	

Fig. 5

structuring of vocational education, and the state of Oregon. Looking at the rationales in **Figure 5**, the factors cited by these states for increased vocational enrollments, we find that there is a span of factors from a greater emphasis on pre-vocational and recruiting through changes in improvement of the quality of vocational education and addition of alternatives for academic credit, utilizing vocational education. Primary factors cited by 50 percent of the states in this category relate to time. They have changed the time available for vocational courses by increasing the number of periods; and they have reduced the instructional time for vocational education content. Those factors of manipulating the time available for vocational instruction seem to be the predominate method that states are using in starting to deal with increased graduation requirements.

Let's look at four case studies to show the range of activity going on in the states. We will look at New York, Virginia, Pennsylvania, and Ohio. New York has gone through a major futuring process. They were interested in overcoming the generally felt opinion that occupational education did not have any standards. They raised the academic graduation requirements and developed requirements for vocational education, using business and industry input along with academic teacher input. New York has the unusual situation of requiring majors and minors of its high school students and offers two types of diploma:

1. A Local Diploma in which students have to take basic competency tests in certain subjects in order to graduate and have three or four electives available to them.
2. A Regent's Diploma which is intended to be a much more rigorous diploma. It includes exams in all subjects that the student has taken.

New York has taken a pro-active and a leadership role by designing state syllabi for vocational education that go beyond state competency tests. They do this in order to discourage what is commonly referred to as "dumping" inadequately

prepared students into vocational programs. They do not want their vocational programs to be remedial and emphasize rote practice but to emphasize understanding of content.

New York has sought to get credit for occupational courses and -- as an equal standing for graduation -- academic credit. For example, they have approved occupational math for math credit, accounting for math credit, business communication for English credit, fashion design for an art credit, business law as a social studies credit, technical drawing as an art credit, and health occupations as health credit. They are currently trying to get credit for vocational student organization participation as a social science credit. In the certification area, they have been encouraging dual certification of their vocational teachers.

Virginia was one of the states that made an early response to the increased academic requirements and has provided state level guidance and support for the acceptance of vocational programming for math and science credit at the local level. Virginia has provided substitutions, guidelines and standards that will help to assure approval. They have revised program structures to provide two to three options per program and some have specified the math and science competencies by program.

Virginia also has two diplomas and has sought to get approved credit in many of the same areas as other states -- for example, health occupations for science credit, business education for math credit, agricultural program for math or science credit. Some of the interesting approvals have been for instance, home economics for math credit and distributive education for a math credit.

Pennsylvania has what is called Chapter Five Curriculum Regulations that provides for a local decision to be made by the superintendent to grant credit, to determine content, and the amount of credit. Pennsylvania initiated the idea of fractional credit -- or less than 120 hours -- that may be approved by counting parts of the vocational program that are documentable to be academic credit. The state

board has been issuing bulletins, or rulings, on a course by course basis and a district by district basis to allow for exceptions that are called to their attention.

Although Pennsylvania is allowing credit in the more typical areas, in one area they are different. Accounting has not been approved for math credit. This is unusual in that in most states accounting has been one of the first things that has been approved as math credit. In Pennsylvania, one must be certified to teach a course and the academic content of the course must be taught by an academically certified instructor.

Ohio wouldn't approve vocational courses for academic credit. So, the Department of Vocational Education initiated a two-year pilot of nine projects, which resulted in three alternatives, called Program Options, to change the vocational education program and add applied academics to related instruction. They called this a blending process. The three options are:

1. Math, science, and communications principles are extrapolated from the cluster areas and organized into a curriculum taught by an academic teacher as part of the vocational block, which is a three-hour lab and a two-hour related period to equal one unit.
2. The subject matter expert helps vocational teachers identify the academic competencies and then they team teach the course.
3. To belong to a national consortium called Principles of Technology administrated by the Council for Occupational Research and Development (CORD) in order to get science and specific physics credit. Physics principles are taught by the science teachers in cooperation with the vocational education teacher.

Ohio reports that their work has resulted in improved test scores and increased student and teacher motivation. Administrators, parents, and program visitors are impressed with student ability to verbalize and how academic instruction relates to

real world work situations. Academic teachers have marvelled at the vocational students' enthusiasm and confidence compared with general academic students. It should be pointed out that Ohio does not provide any additional money for districts to become involved with these options. They now have 45 districts participating in the second year of this project -- with great success.

There are some typical procedures that are used in a state approval process and **Figure 6** shows the Illinois approval process. Illinois is typical of many states in that approval of academic credit for a vocational course is a local option. In Illinois, the local decision must verify that 51 percent of the course is academic content in order to receive academic credit. The state, then, will check this during their public school approval visit which occurs approximately every five years.

In more detail, the state of Michigan employs several exemplary models, one of which is cited in **Figure 7** and is called the **ACTIVE Michigan overlap process**.

In this process, state competency lists are compared to local lists and competencies identified for vocational education. From these, the academic competencies are extrapolated using a team approach of academic and vocational instructors. The time spent on each task is defined and documented in order to match up to state or local requirements, and to develop recommendations for academic credit for approval by the local board.

In looking across states, this writer took the work that was done by the Virginia study, reported on in July of 1986, and in December of 1986 verified and updated that data with a phone survey of 15 states. The findings of that phone survey are broken down in **Figure 8** and contain the strategy issue areas of State Responses, Credit, Content, Scheduling, Certification, Attitude, Funding, and Credit Transfer as the major issues of concern. **Figure 8** shows these strategies of state and local education agencies ranked from top to bottom to include the least stringent down to the most stringent and from most common to least common. For

ILLINOIS APPROVAL PROCESS

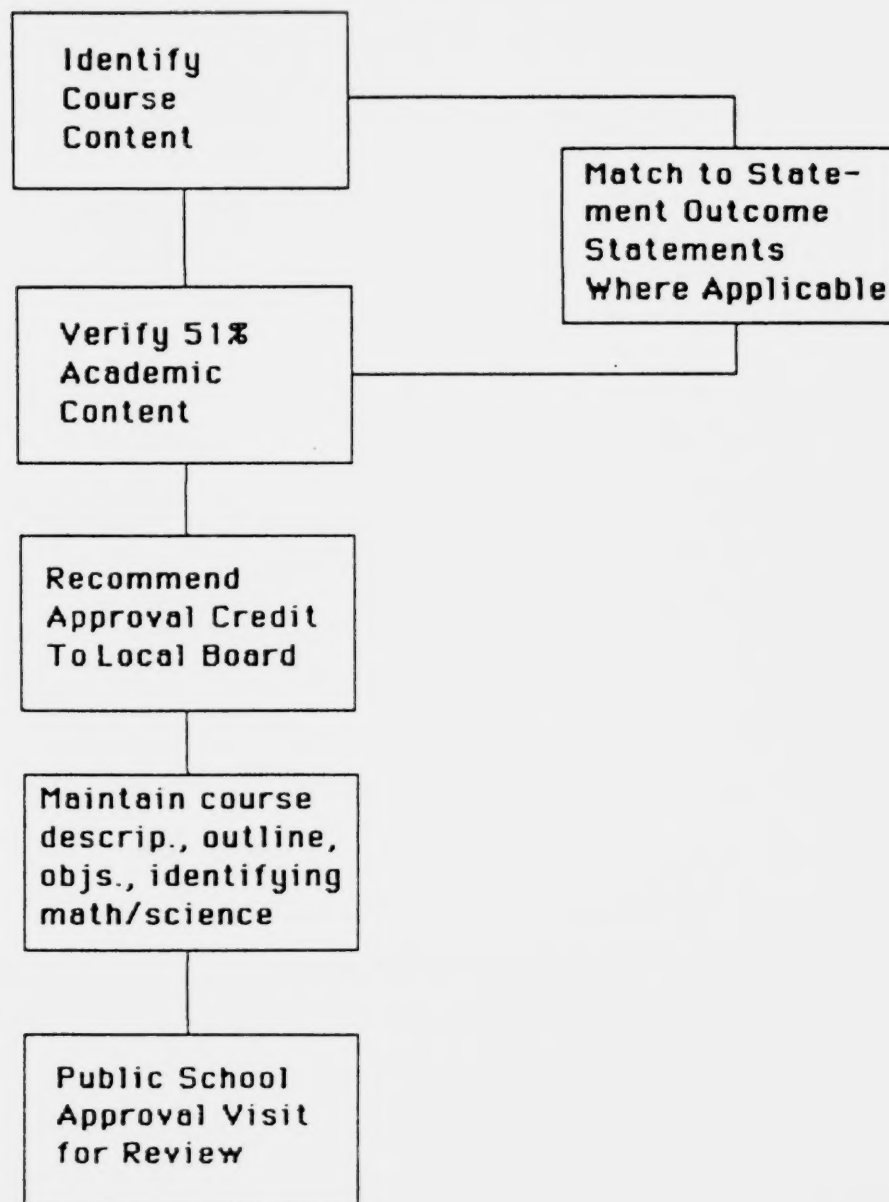


Fig 6

ACTIVE MICHIGAN OVERLAP PROCESS

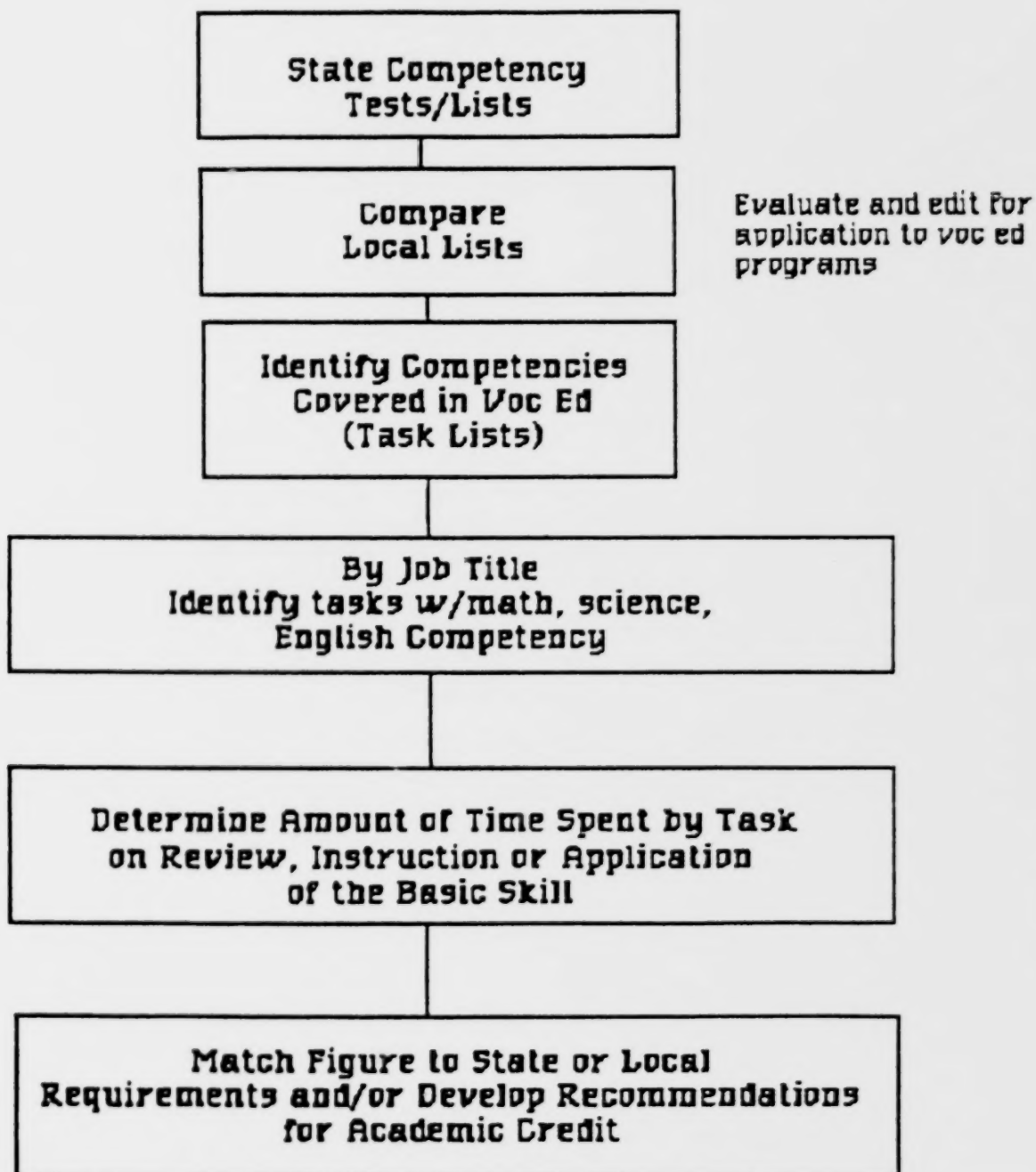


Fig. 7

Strategies of State and Local Education Agencies for Increased Academic Foundations in Vocational Curriculum

Range	State Responses	Credit	Content	Scheduling	Certification	Attitude	Funding	Credit Transfer
Low	No change	Seek credit for existing program w/o change	Isolation of academic competencies	Shorten periods	None	Inservice for local admin., tchr. & counselor awareness of vocational education	None	Cite voc courses as academic on transcript
	Local option to grant credit and amount of credit		Reduction of vocational content	Increase number of periods	Course by course approval for vocational teacher to teacher		Inservice grants	
	Local option w/documentation	Redefine program to meet state standards	Increased clustering	Increase academic courses offered at area centers		Increased counselor training	Additional funds for meeting state competency standards or program standards	Seek acceptance of voc ed as academic credit w/o course title change
	State appl's for alternate credit by course, time, grade level etc.	Redefine program to meet state standards using fractional accumulation	Redevelopment of curriculum to meet state standards	Increase semester course offerings	Grants or incentives for certification upgrades	Increased pre-voc recruitment	Penalties if state standards not met.	
	Program options by service area				Redocumentation of college academic work	"Sell" local boards on applied academics	Reimbursement on FTE	
	Reduce recommended program sequences			Increase one year programs				
	Defined credit variables			Increase emphasis on special vocational schools	Inservice on improved teaching skills	Increased adults in secondary programs		
	Statewide conference				Team teaching	Establish strong coop with academic teachers at local level		
	Consortium membership							
	Upgrade of credentialing							
	State content mandates					Inservice to overcome voc teacher resistance		
High								

example, **State Responses** to increased requirements have been within the range of from "no change" within the state down to state making "content mandates" as has happened in states such as New York, Texas, West Virginia, and California.

In the issue area of **Credit**, the activity range is from local schools seeking credit for existing programs -- without any change -- to re-defining a program to meet state standards -- to re-define the program to meet increased academic content resulting in a major re-definition of vocational education.

The issue area of **Content** has been approached primarily by isolating the academic competencies and reducing the vocational content to the absolute core competencies. There has been some increased clustering in order to take advantage of this reduced content in vocational courses and, of course, redevelopment of curriculum to meet state standards.

In the issue area of **Scheduling** the typical responses have been to shorten periods and thereby increase the number of periods to also increase the academic courses offered at an area vocational center rather than at the home high school in order to reduce the travel time and also to increase semester course offerings, emphasizing enrollment in a course over a two-year program. In the same vein, there has been an increase in one-year programs. Research has also indicated that there is an increased emphasis on special vocational schools such as the Ag School in Chicago.

The **Certification** issue is one that is especially knotty and of great concern to vocational educators. The range of activity in this issue area is from "none" -- no activity at all -- to "team teaching" such as in the state of Ohio. In between those extremes are efforts to get course by course approval for a vocational educator to teach the course. There have been grants and incentives given for certification upgrading of vocational teachers to make them academically certified by re-

documentation of college academic work and by encouraging increased college academic work.

The area of **Attitude** is one that has taken a lot of attention by states in working with the local vocational teachers and administrators who recognize the value of increasing the academic foundations within the vocational program in order to: (1) save vocational programs from extinction and (2) to improve the quality of the programs and the capabilities of the students within those programs. There has been a heavy increase in counselor training, as well, and in pre-vocational recruitment. There has been a heavy emphasis on marketing or selling vocational education to local school boards based on the idea that the programs are better because they are emphasizing basis skills.

On the **Funding** issue there has been very little provided by states in the way of funding initiatives that will allow vocational education to respond to this challenge. Typically states are offering incentive grants for schools to try different alternatives and grants that will assist with the revision of the curriculum. In addition, there have been some funds being made available for meeting state competency standards or program standards as outlined by the state. In at least one state, there have been penalties designed if state standards are not met. Other states are re-thinking their reimbursement procedure and changing reimbursements based on student full-time equivalent rather than program completers or program enrollments.

The last issue area is **Credit Transfer** and the acceptance of vocational courses as academic credit by colleges, community colleges, and other institutions of continuing training. The responses in some states have been to cite vocational courses as academic on the transcript if they have been approved for academic credit. So, for instance, accounting would not appear as accounting on the transcript but as mathematics credit. Another avenue currently being pursued is to

seek acceptance of vocational education as academic credit without course title change. These are the areas where the most activity has taken place in the last two years.

Some of the issues that have not been addressed adequately or not at all need to be commented upon and prepared for (see Figure 9). There are unanswered questions surrounding each issue. The first of these is Supervision and Evaluation issues. If there is a large amount of team teaching going on with academic and vocational instructors, the question yet to be asked is who is going to be supervising and evaluating these instructors? How is that evaluation and supervision to be equalized between the two? Will the same evaluation instruments be used for the academic instructor as the vocational teacher?

The next issue is Funding. Very little has been provided in the way of funding for this initiative. There must be some major funding initiatives before major and comprehensive changes can occur.

Another area that has the potential of causing some difficulties is in the states with a Split Diploma. Is vocational course work, which is given academic credit, equally applicable to both types of diplomas in a state where two diplomas are offered? This relates, of course, to the transfer for credit issue. It has quietly been growing and is a major question to graduates in the future -- whether a college will accept vocational coursework to meet the entrance requirements, which, in some colleges, require academic credentials beyond the high school graduation requirements. This may turn out to be very situational in that if a college or university is in need of students, their criteria may be a little less stringent than an institution which is not looking for transfer or new student enrollments.

Teacher Certification is also going to be a larger issue in the future. Many states -- as part of their reform packages -- are not only increasing their academic requirements for high school students but they are increasing their academic

FUTURE ISSUES

**SUPERVISION & EVALUATION
FUNDING
SPLIT DIPLOMAS
TRANSFER CREDIT
NEW TEACHER CERTIFICATION
RESOURCES
DOCUMENTATION OF LOCAL
OPTION DECISIONS
NEW VOCATIONAL
LEGISLATION**

Fig. 9

requirements in order to be able to teach in the secondary and postsecondary institutions. This change may have the effect of decreasing vocational teacher certifications across the country.

The lack of Resources combining vocational competencies and academic competencies is a major impediment in some areas as well. There is work being done by some exemplary state and local projects such as the ACTIVE Report in Michigan, and also a packet of resource materials that will be produced and disseminated by the National Center for Research in Vocational Education in the near future, but the resources are slim.

Another area that has the future potential of becoming very hot is in the Documentation of Local Option Decisions. The majority of states leave it to the local option to determine academic credit and the amount of credit. There is very little being done in the way of monitoring the consistency of those decisions within a state and/or across states. Some states are issuing approvals on a district by district basis and even the state approvals are not consistent across districts. Sooner or later, this is going to become a major issue from the federal level if not from the state.

Lastly, of course, we look at the impetus of new vocational legislation. The current legislation places heavy emphasis on the achievement of competency levels by vocational students across the state and documentation of those levels of competency. What will the new legislation provide in this area? Will it strengthen it? Will it ignore it?

As can be seen by the data provided in this article and other studies, there is very little consistency among the states. The decreased enrollments, in many states, the increased graduation requirements, and the interest generated by the national reports, all have significant forces for strengthening academic foundations. Procedures and policies in each state differ in regard to certification, time available,

and all the factors and issues discussed above in implementing legislation. It is not easy nor politically feasible for one state to adopt another state's strategies. Each state must answer some basic questions for itself. In the case of a local option, the local schools must ask these questions cited by Parks, 1986:

1. Is there interest and need to strengthen academic foundations of vocational education? To address this question will require clarity and consensus among personnel to be involved at the local level. The administration must provide a very positive and strong leadership and adequate fiscal resources.
2. Who teaches the academic portion of the vocational course? This will, of course, depend upon the need to build credit earning capacity and also on state certification standards. A state's philosophical history of vocational education and typical scheduling practices must also be considered here.
3. How can academic content be a part of the vocational programs? The information in this article and other sources have provided some models on how this can be accomplished, utilizing business and industry people and academic instructors, working in tandem with vocational education to isolate and identify the academic competencies by vocational course.

It is not just vocational education people that are interested in how we are going to be able to respond to this challenge.

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